Release notes for ENDF/B Development n-021_Sc_045 evaluation

April 26, 2017

- `psyche` Warnings:

1. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 0 / AT RESONANCE ENERGY 4.71800E+04 EV. THE GAMMA WIDTH 5.30000E-02 DEVIATES TOO MUCH FROM THE AVERAGE 8.16390E-01 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  0
                AT RESONANCE ENERGY  4.71800E+04 EV. THE GAMMA WIDTH  5.30000E-02 DEVIATES TOO MUCH FROM THE AV
```

2. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 0 / AT RESONANCE ENERGY 6.78500E+04 EV. THE GAMMA WIDTH 2.67000E+00 DEVIATES TOO MUCH FROM THE AVERAGE 8.16390E-01 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  0
                AT RESONANCE ENERGY  6.78500E+04 EV. THE GAMMA WIDTH  2.67000E+00 DEVIATES TOO MUCH FROM THE AV
```

3. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 0 / AT RESONANCE ENERGY 6.83750E+04 EV. THE GAMMA WIDTH 3.28000E+00 DEVIATES TOO MUCH FROM THE AVERAGE 8.16390E-01 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  0
                AT RESONANCE ENERGY  6.83750E+04 EV. THE GAMMA WIDTH  3.28000E+00 DEVIATES TOO MUCH FROM THE AV
```

4. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 9.72500E+03 EV. THE GAMMA WIDTH 3.30000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  9.72500E+03 EV. THE GAMMA WIDTH  3.30000E-01 DEVIATES TOO MUCH FROM THE AV
```

5. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 2.07260E+04 EV. THE GAMMA WIDTH 3.29000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  2.07260E+04 EV. THE GAMMA WIDTH  3.29000E-01 DEVIATES TOO MUCH FROM THE AV
```

6. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 2.11140E+04 EV. THE GAMMA WIDTH 3.20000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  2.11140E+04 EV. THE GAMMA WIDTH  3.20000E-01 DEVIATES TOO MUCH FROM THE AV
```

7. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 3.00100E+04 EV. THE GAMMA WIDTH 3.30000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.00100E+04 EV. THE GAMMA WIDTH  3.30000E-01 DEVIATES TOO MUCH FROM THE AV
```

8. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 3.11350E+04 EV. THE GAMMA WIDTH 2.94000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.11350E+04 EV. THE GAMMA WIDTH  2.94000E-01 DEVIATES TOO MUCH FROM THE AV
```

9. Gamma width not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 3.32800E+04 EV. THE GAMMA WIDTH 3.24000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.32800E+04 EV. THE GAMMA WIDTH  3.24000E-01 DEVIATES TOO MUCH FROM THE AV
```

10. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 3.54700E+04 EV. THE GAMMA WIDTH 3.26000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.54700E+04 EV. THE GAMMA WIDTH  3.26000E-01 DEVIATES TOO MUCH FROM THE AV
```

11. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 3.63900E+04 EV. THE GAMMA WIDTH 3.45000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.63900E+04 EV. THE GAMMA WIDTH  3.45000E-01 DEVIATES TOO MUCH FROM THE AV
```

12. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE

ENERGY 3.69300E+04 EV. THE GAMMA WIDTH 3.12000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.69300E+04 EV. THE GAMMA WIDTH  3.12000E-01 DEVIATES TOO MUCH FROM THE AV
```

13. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 3.87300E+04 EV. THE GAMMA WIDTH 3.16000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  3.87300E+04 EV. THE GAMMA WIDTH  3.16000E-01 DEVIATES TOO MUCH FROM THE AV
```

14. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 4.23000E+04 EV. THE GAMMA WIDTH 3.27000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  4.23000E+04 EV. THE GAMMA WIDTH  3.27000E-01 DEVIATES TOO MUCH FROM THE AV
```

15. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 4.40800E+04 EV. THE GAMMA WIDTH 3.42000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  4.40800E+04 EV. THE GAMMA WIDTH  3.42000E-01 DEVIATES TOO MUCH FROM THE AV
```

16. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 4.53000E+04 EV. THE GAMMA WIDTH 3.17000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  4.53000E+04 EV. THE GAMMA WIDTH  3.17000E-01 DEVIATES TOO MUCH FROM THE AV
```

17. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 4.73100E+04 EV. THE GAMMA WIDTH 3.27000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  4.73100E+04 EV. THE GAMMA WIDTH  3.27000E-01 DEVIATES TOO MUCH FROM THE AV
```

18. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 5.05000E+04 EV. THE GAMMA WIDTH 3.00000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  5.05000E+04 EV. THE GAMMA WIDTH  3.00000E-01 DEVIATES TOO MUCH FROM THE AV
```

19. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 5.06850E+04 EV. THE GAMMA WIDTH 3.00000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  5.06850E+04 EV. THE GAMMA WIDTH  3.00000E-01 DEVIATES TOO MUCH FROM THE AV
```

20. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 5.10500E+04 EV. THE GAMMA WIDTH 3.00000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  5.10500E+04 EV. THE GAMMA WIDTH  3.00000E-01 DEVIATES TOO MUCH FROM THE AV
```

21. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 5.45250E+04 EV. THE GAMMA WIDTH 3.10000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  5.45250E+04 EV. THE GAMMA WIDTH  3.10000E-01 DEVIATES TOO MUCH FROM THE AV
```

22. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 6.04200E+04 EV. THE GAMMA WIDTH 3.42000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  6.04200E+04 EV. THE GAMMA WIDTH  3.42000E-01 DEVIATES TOO MUCH FROM THE AV
```

23. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 6.20250E+04 EV. THE GAMMA WIDTH 3.00000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  6.20250E+04 EV. THE GAMMA WIDTH  3.00000E-01 DEVIATES TOO MUCH FROM THE AV
```

24. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 6.25000E+04 EV. THE GAMMA WIDTH 2.90000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  6.25000E+04 EV. THE GAMMA WIDTH  2.90000E-01 DEVIATES TOO MUCH FROM THE AV
```

25. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 6.70500E+04 EV. THE GAMMA WIDTH 3.27000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  6.70500E+04 EV. THE GAMMA WIDTH  3.27000E-01 DEVIATES TOO MUCH FROM THE AV
```

26. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 7.21150E+04 EV. THE GAMMA WIDTH 3.33000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  7.21150E+04 EV. THE GAMMA WIDTH  3.33000E-01 DEVIATES TOO MUCH FROM THE AV
```

27. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 7.54300E+04 EV. THE GAMMA WIDTH 3.08000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  7.54300E+04 EV. THE GAMMA WIDTH  3.08000E-01 DEVIATES TOO MUCH FROM THE AV
```

28. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 7.64200E+04 EV. THE GAMMA WIDTH 3.07000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  7.64200E+04 EV. THE GAMMA WIDTH  3.07000E-01 DEVIATES TOO MUCH FROM THE AV
```

29. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE

ENERGY 8.55250E+04 EV. THE GAMMA WIDTH 2.08000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  8.55250E+04 EV. THE GAMMA WIDTH  2.08000E-01 DEVIATES TOO MUCH FROM THE AV
```

30. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 8.66700E+04 EV. THE GAMMA WIDTH 4.04000E+01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  8.66700E+04 EV. THE GAMMA WIDTH  4.04000E+01 DEVIATES TOO MUCH FROM THE AV
```

31. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 9.27200E+04 EV. THE GAMMA WIDTH 3.00000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  9.27200E+04 EV. THE GAMMA WIDTH  3.00000E-01 DEVIATES TOO MUCH FROM THE AV
```

32. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 9.52500E+04 EV. THE GAMMA WIDTH 1.87000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  9.52500E+04 EV. THE GAMMA WIDTH  1.87000E-01 DEVIATES TOO MUCH FROM THE AV
```

33. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 45. L = 1 / AT RESONANCE ENERGY 9.64400E+04 EV. THE GAMMA WIDTH 3.37000E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.05304E+00 (0): Gamma width

```
FILE  2
   SECTION 151
        ISOTOPE MASS =  45. L =  1
                AT RESONANCE ENERGY  9.64400E+04 EV. THE GAMMA WIDTH  3.37000E-01 DEVIATES TOO MUCH FROM THE AV
```

34. Non-threshold reaction with Q value differing from PSYCHE's expectations
FILE 3 / SECTION 103 / THE CALCULATED Q 6.74121E+05 DISSAGREES WITH THE GIVEN Q 5.26000E+05 (0): Iffy Q

```
FILE  3
   SECTION 103
            THE CALCULATED Q  6.74121E+05 DISSAGREES WITH THE GIVEN Q  5.26000E+05
```

- `recent` Warnings:

1. Competative widths aren't all zero like they're supposed to be
   0: LRX=0

```
 Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
 ============================================================================
 Retrieval Criteria-----------        MAT
 File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)
 Reactions with No Background-     Output (Resonance Contribution)
... [354 more lines]
```

- `fudge-4.0` Warnings:

  1. Missing a channel with a particular angular momenta combination
     resonances / resolved (Error # 1): missingResonanceChannel

```
WARNING: Missing a channel with angular momenta combination L = 0, J = 2.0 and S = 2.0 for "capture"
WARNING: Missing a channel with angular momenta combination L = 1, J = 2.0 and S = 2.0 for "capture"
WARNING: Missing a channel with angular momenta combination L = 1, J = 3.0 and S = 2.0 for "capture"
WARNING: Missing a channel with angular momenta combination L = 1, J = 3.0 and S = 3.0 for "capture"
        ... plus 1 more instances of this message
```

  2. Potential scattering hasn't converted, you need more L's!
     resonances / resolved (Error # 2): potentialScatteringNotConverged

```
WARNING: Potential scattering hasn't converged by L=1 at E=96940.0 eV, xs[1]/xs[0]=0.138983838329% > 0.1%
```

- `fudge-4.0` Errors:

  1. The spin statistical weights are off, indicating missing channels
     resonances / resolved / MultiLevel_BreitWigner (Error # 0): badSpinStatisticalWeights

```
WARNING: The spin statical weights for L=1 sums to 2.0, but should sum to 3.0.  You have too few channels for re
```

  2. Calculated and tabulated Q values disagree.
     reaction label 16: n[multiplicity:'2'] + Sc44 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -13032132.23233795 eV vs -1.1454e7 eV!
```

  3. Calculated and tabulated Q values disagree.
     reaction label 17: n + H1 + Ca44 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -8597399.298309326 eV vs -6.8909e6 eV!
```

  4. Calculated and tabulated Q values disagree.
     reaction label 18: Sc46 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7051525.393218994 eV vs 8760690. eV!
```

  5. Calculated and tabulated Q values disagree.
     reaction label 19: n + He4 + K41 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -9642749.937179565 eV vs -7.9337e6 eV!
```

  6. Calculated and tabulated Q values disagree.
     reaction label 20: H1 + Ca45_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1182610.051094055 eV vs 5.26e5 eV!
```

7. Calculated and tabulated Q values disagree.
   reaction label 21: H2 + Ca44_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6372833.197380066 eV vs -4.6663e6 eV!
```

8. Calculated and tabulated Q values disagree.
   reaction label 22: H3 + Ca43_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -11246758.26232147 eV vs -9.5429e6 eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 23: He3 + K43_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -13043566.93654633 eV vs -1.1338e7 eV!
```

10. Calculated and tabulated Q values disagree.
    reaction label 24: He4 + K42_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -2108949.284545898 eV vs -397170. eV!
```

11. Energy range of data set does not match cross section range
    production label 25: /reactionSuite/reactions/production[@label='25'] / Product: gamma / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (999999.0 -> 20000000.0) vs (1e-05 -> 20000000.0)
```

12. Energy range of data set does not match cross section range
    production label 25: /reactionSuite/reactions/production[@label='25'] / Product: gamma / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (1000000.0 -> 20000000.0) vs (1e-05 -> 20000000.0)
```

- `njoy2012` Warnings:

1. Evaluation has no unresolved resonance parameters given
   unresr...calculation of unresolved resonance cross sections (0): No URR

```
 ---message from unresr---mat 2125 has no unresolved parameters
                          copy as is to nout
```

2. Evaluation has no unresolved resonance parameters given
   purr...probabalistic unresolved calculation (0): No URR

```
 ---message from purr---mat 2125 has no unresolved parameters
                        copy as is to nout
```

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

```
 ---message from conver---cannot do complete particle production for mt= 16
                         only mf4/mf5 provided
```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 22
                         only mf4/mf5 provided
```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 28
                         only mf4/mf5 provided
```

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 91
                         only mf4/mf5 provided
```